

The Orca Pass International Stewardship Area: Hands Across the Border

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Abstract

Despite the political boundary, the “transboundary” waters between British Columbia and Washington State are really a single ecosystem. In the fall of 1999, more than 20 citizen groups came together around the need to establish a protected area in these shared waters. The area is rich in natural beauty, marine biodiversity, environmentally sensitive habitat, and sites of cultural and spiritual importance to Coast Salish tribes and First Nations on both sides of the border. The area of interest includes and adjoins Boundary Pass (between the Canadian Gulf Islands and the US San Juan Islands), and was named the **Orca Pass International Stewardship Area** (after the orca whales that transit these waters regularly). The area was selected by using mapped physical characteristics, marine resources, and constituent interests to identify the borders of an ecological system in need of protection due to declining or endangered natural resource. Proponents have met with tribal representatives and government officials on both sides of the border in developing this citizens’ initiative that complements and enhances governmental and local protection efforts, such as the Islands Trust/San Juan County marine protection initiative and the National Marine Conservation Area proposed by Parks Canada for the southern Georgia Strait.

Introduction

The marine area and intertidal zones of the region bordered by Canada’s southern Gulf Islands and the US San Juan Islands are among the most biologically rich and sensitive marine regions in the world.

On the US side, the area was once proposed as part of a Northwest Straits National Marine Sanctuary and is currently a part of the US Northwest Straits Marine Conservation Initiative. In 1994, Canadian federal and provincial government natural resource agencies created an intergovernmental steering committee to develop a coordinated Marine Protected Areas Strategy. Following the 1994 Washington/British Columbia Marine Science Panel report on the urgent need to address habitat loss, water pollution, and resource depletion on a transboundary basis, the governments of British Columbia and Washington State created the Puget Sound/Georgia Basin Task Force to work cooperatively to addressing these issues. Despite the best of intentions, governmental efforts to establish transborder marine protected areas have been slow, scattered and piecemeal.

Since 1991, British Columbia and Washington State non-governmental conservation organizations such as Georgia Strait Alliance and People For Puget Sound have worked cooperatively as the Sound & Straits Coalition to address transboundary marine issues. Since the fall of 1999, Sound & Straits Coalition groups (People For Puget Sound, Friends of the San Juans, Waldron Community, Evergreen Islands, Washington Scuba Alliance, Tokitae Foundation, Georgia Strait Alliance, Canadian Parks and Wilderness Society, Living Oceans Society, Underwater Clubs of British Columbia, Galliano Island Conservancy, Oceans Blue Foundation) have met to identifying a cross-border region that would be the focus of a citizens’ initiative to move governments and tribes towards cooperatively establishing protected areas in the transboundary waters. Lummi, Swinomish, Tulalip, Coast Salish tribes and BC Aboriginal Fishers and Northwest Indian Fisheries Commission representatives have participated in Orca these discussions. This cooperative effort had as its condition the full recognition of tribal co-management rights, the involvement of all interested publics, and compliance—through education and enforcement—of all applicable federal, provincial, state and local laws and regulations.

Stewardship that addresses marine species declines

Creating a Stewardship Area through a citizens' initiative was prompted by steep declines in populations of multiple marine species. Prominent among those species that led to this project are the southern resident Orca whales that have been petitioned for US Endangered Species Act listing and Puget Sound fish species recently reviewed for listing under the US ESA. Also of concern are a suite of birds, marine mammals and habitats that are considered to be in steep decline and are listed as "priority," endangered or threatened by Washington State and British Columbia.

The Orca Pass International Stewardship Area has been formally adopted by the BC Islands Trust Association and San Juan County's Board of County Commissioners in a working agreement with the Sound & Straits Coalition signed in November 2000. Islands Trust, San Juan County, the Sound & Straits Coalition, government agencies, and Native Tribes began discussions in May 2001 of a shared strategy to protect and restore critical habitats and resources through designation of marine protected areas within the Stewardship Area boundary.

The Orca Pass International Stewardship Area has four goals:

1. To protect and restore important habitats with specific attention to reefs and intertidal and nearshore marine zones that benefit the widest diversity of species.
2. To establish and monitor specific protected zones within the Area, based on science and local/traditional knowledge, and to measure and report on species health, abundance and diversity.
3. To increase and sustain healthy populations of key species of fish, marine mammals, marine birds, marine plants, crustaceans, mollusks, and other invertebrates.
4. To prevent land and water pollution by petroleum products, toxic chemicals, sewage, plastics, and non-native plant and animal species.

Despite the political boundary, the transboundary waters within the Stewardship Area between BC and Washington State really make up a single ecosystem. They're home to the same marine creatures—from orca whales to oystercatchers—and are affected by the same types and sources of pollutants and habitat and population disruptions.

Defining Orca Pass

The Orca Pass International Stewardship Area boundaries have evolved through the process of species and habitat data analyses and public consultations. As of the time of this paper (May 2001), the area is bordered on the south by the northern and western edge of the San Juan Archipelago (including the north shores of Orcas and San Juan Islands, and the western shores San Juan and portions of Lopez Island). The area extends north through the southern Gulf Islands (to the southern edge of Galliano Island) in the north, and includes portions of the Saanich Peninsula to the West.



Species data for the US side were collected from the Puget Sound Ambient Monitoring Program, Washington Department of Fish and Wildlife, the Natural Heritage program and the Whale Museum. Much of this data is widely available, while some were developed with partners from consultation with individual species managers. Habitat data for the US side were developed primarily using the Washington Department of Natural Resources' ShoreZone data set and bathymetry data collected from the Washington Department of Fish and Wildlife. Some species and habitat data were developed through expert interviews and through expert workshops where resource managers and scientists from throughout the state were brought together

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to discuss data with a particular focus on this project. The Orca Pass mapping and data analysis methodologies were discussed and reviewed at a two-day scientific experts workshop in April 2001 convened by People For Puget Sound and The Nature Conservancy.

In Canada, species data were collected from federal and provincial agencies including LUCO for data that is publicly available. Some species data were collected from expert workshops and from data collected by the Canadian Parks and Wilderness Society through their own workshops.

The Orca Pass International Stewardship Area captures a functional unit that is considered as a whole despite its crossing an international border. People For Puget Sound's analysis differentiates, at its finest scale, sites at a 25 hectare resolution (500X500 meter grid across our area of interest/study area). The use of larger resolution analyses is being explored to capture wide ranging species and habitats that depend on conditions and spatial arrangements not captured in 25 hectare planning units.

The primary variables being addressed are species occurrence as identified through surveys and expert consultation; species life stage information as identified through surveys; and habitat as identified in either the nearshore (shoreline data taken from ShoreZone) or marine environment (developed using bathymetry and other data sources).

Our analysis currently uses historic information for the purpose of identifying species representation goals in our project. These goals are developed using expert consultation and reports such as *Geographical Distribution of Puget Sound Fishes: Maps and Data Source Sheets* (Miller and Borton 1980).

Identifying “Richness Zones”

Within this larger Stewardship Area, three “core” sites on the US side have been preliminarily identified as “Richness Zones” for special protection that might allow the larger ecosystem to function despite ongoing human impacts. Identification of these zones uses known species distributions, ecological information, and appropriate algorithms to identify an efficient network of sites intended to protect those species identified as being at greatest risk. These “Richness Zones” are in the areas of Patos/Saturna islands, Wescott Bay (San Juan Island) and vicinity, and Cattle Point/Iceberg Point.(south San Juan Channel) are likely candidates for designation as marine protected areas, marine reserves, marine parks or protection using other tools. Designation of these “Richness Zones” focuses attention on the need for further scientific assessments and review of whether existing regulations and compliance are adequate to protect critical habitats and organisms within these zones. (Identification of “core” sites in BC waters has been hampered by lack of government cooperation in access to resource data.)

The critical, and in some ways unique, components of the Orca Pass approach are that it places habitats and natural resources on both sides of the boarder into a common framework. In this way, Orca Pass can be seen as a regional effort that is attempting to use an ecosystem approach for targeting conservation decisions, rather than basing these decisions on single species management goals or politically relevant but biologically meaningless geographic constraints.

Although the specific results of Orca Pass analysis are discrete locations identified in this area of interest, its methodology and criteria used for identifying and selecting sites for protection and for promulgating appropriate management are applicable throughout the Salish Sea. People For Puget Sound uses an algorithm developed by Hugh Possingham and Ian Ball to place habitat and species occurrence data into a common framework for making decisions about how to most efficiently protect species groups of interest. This framework allows us to set species and habitat specific representation goals and enables us to define what represents “viable (or sustainable) occurrences.” More information about this tool and its uses is available at: <http://www.biogeog.ucsb.edu/projects/tnc/overview.html>.

Government, tribal, and public consultations are expected to continue using the framework of the Orca Pass International Stewardship Area and “Richness Zone” methodology. The Sound & Straits Coalition will continue its consultations with scientists and resource stewards, general public and decision makers, and constituencies (kayakers, whale watchers and whale watch tour operators, and scuba divers) who might be

encouraged to support protection of marine resources. The overall methodology for identifying sites will continue to be revised to include more information about invertebrate species and habitat classification. People For Puget Sound expects to have preliminary results from this analysis in Fall 2001 and to produce detailed results and publications in early 2002.

Ongoing progress in consultations and products can be accessed through People For Puget Sound's website, www.pugetsound.org, and Georgia Strait Alliance, www.georgiastrait.org.

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